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Complexities of Energy Transition:What do we really know about social acceptance of wind energy?

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Complexities of Energy Transition: What do we really know about social acceptance of wind energy?



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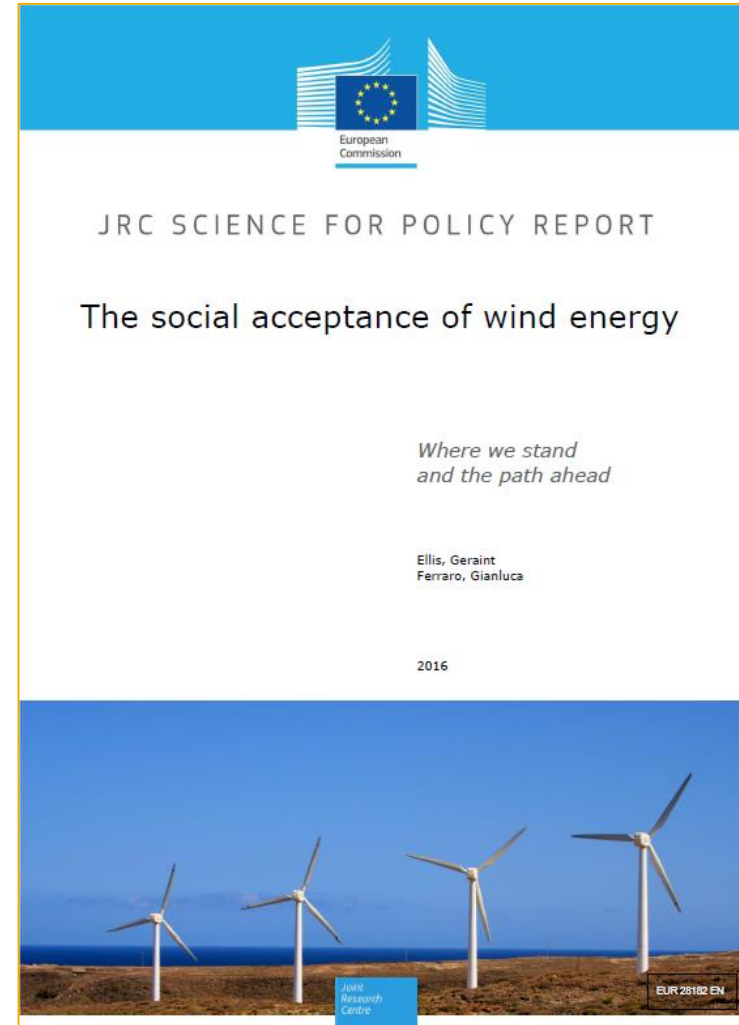
Joint Research Centre, European Commission

Why is this important?

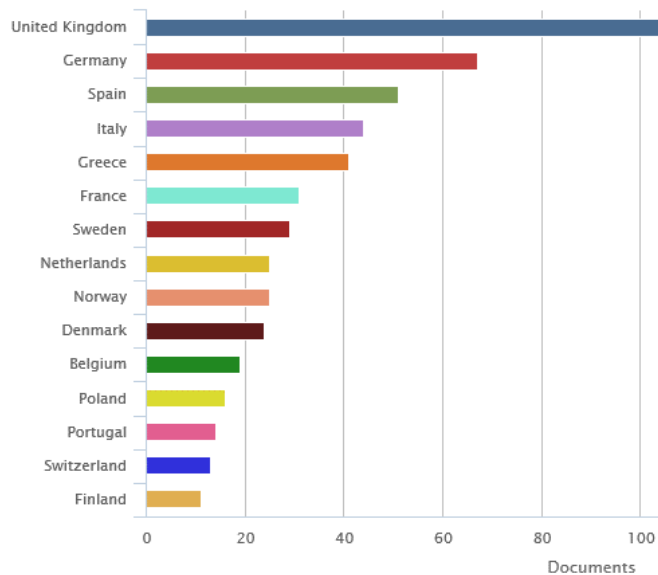
- 'Social acceptance' captures a key aspect of energy-society relationships;
- It helps define the delivery of RE, its democratic profile and the nature of future energy pathways;
- Acceptance issues appear to becoming the key limiting factor in expanding wind in some areas;
- Governments and developers (sometimes) respond to research in this field;
- Research on wind energy has set many of the questions and concepts for other technologies;
- A need to reflect on what we are trying to find out, and why.

The Social Acceptance of Wind Energy: *Where we stand and the path ahead*

- Review of literature on social acceptance of wind energy undertaken for the European Commission's Joint Research Centre in late 2016.
- Report aimed to provide evidence support for EU policy.
- Reviews key conceptual issues and main drivers of community concerns including attitudes, impacts and governance of wind energy projects.
- Also focuses on future research and key implications for policy and practice.
- Report is available here:
<https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/social-acceptance-wind-energy-where-we-stand-and-path-ahead>



Research into Social Acceptance of Wind Energy

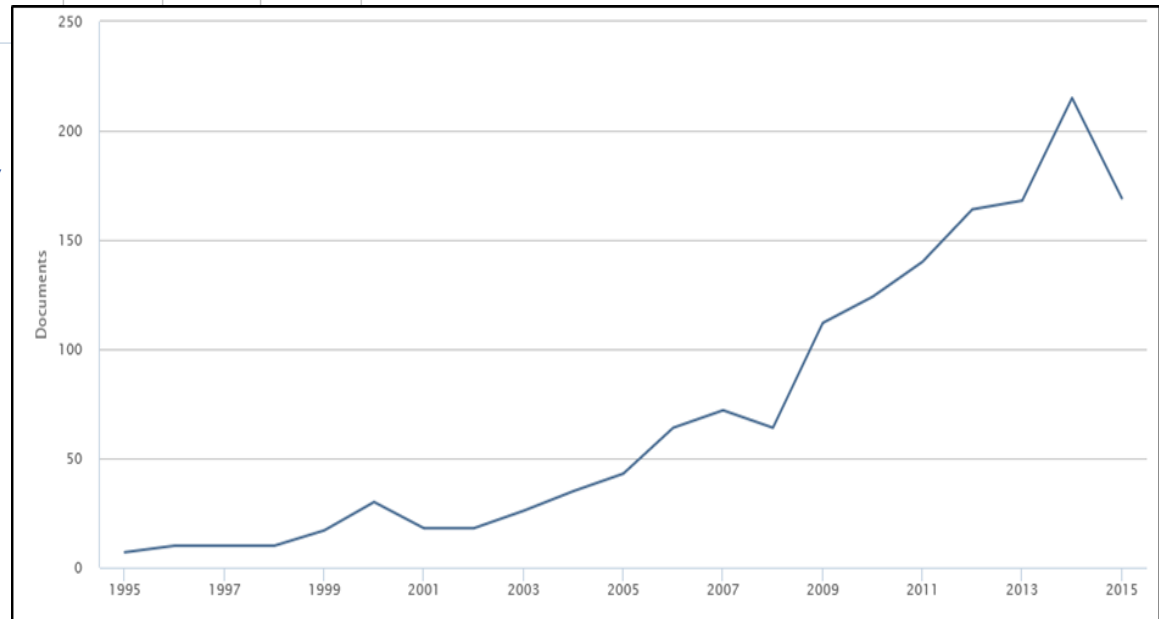


Most common European countries affiliated with 'wind energy' and 'community' research outputs, 1995-2015.

'Wind energy' & 'community' research outputs, 1995-2015

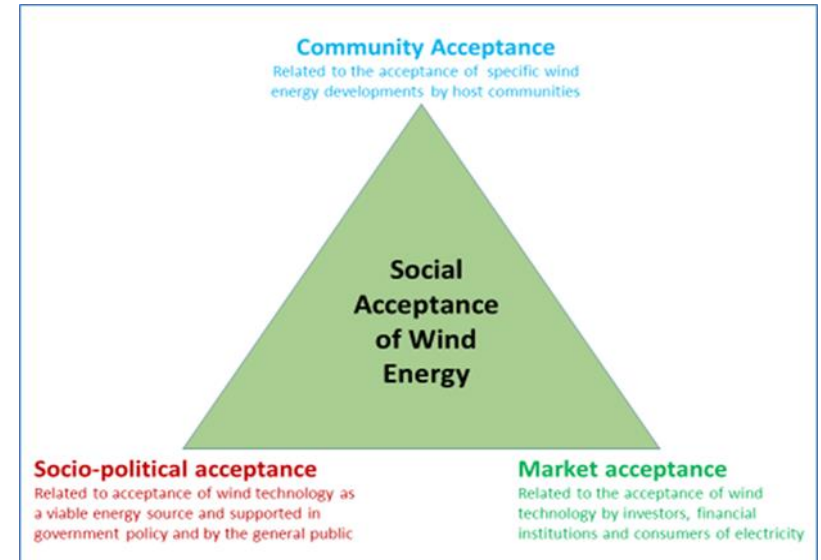
Source: Scopus

- Emphasis on peer-reviewed research, some grey literature
- Key searches + snowballing
- Focus on European context
- C.230 studies

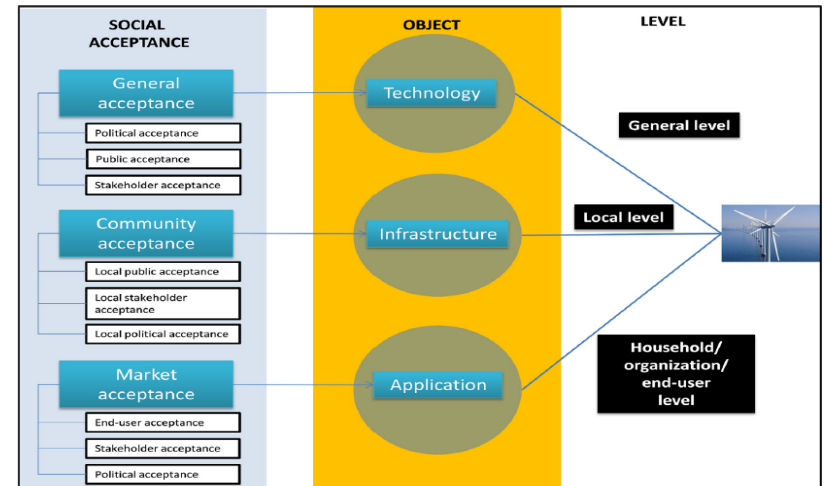


Social Acceptance: Conceptual Issues

- From a bi-lateral public-turbine relationship to a more complex concept.
- Energy as a social-technical system.
- Relationships between communities and turbines are dynamic, context specific & complex.
- Tendency to focus on individual projects and therefore open to isolated 'fixes'.
- Concept has strong resonance with a many actors and creates an important space for debate and enquiry.
- It must also engage a range of other concepts including: power, justice, place attachment.



After Wüstenhagen et al 2007)



from Upham et al 2014

Contexts of Social Acceptance



'Universal' factors:

Technological performance (noise, efficiency, cost); alternative technologies; references to wider narratives (climate change, energy security etc).

'Political/Regulatory' factors:

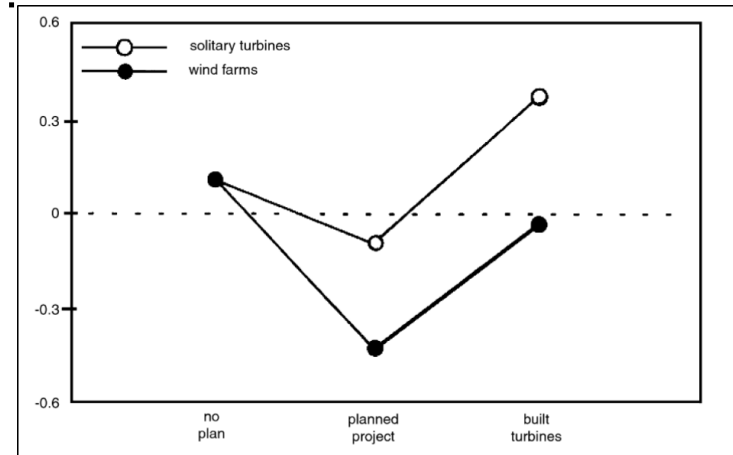
Trust; appropriateness of policy; compensation/subsidies; identification of 'acceptable' locations; defining expectations of stakeholders.

'Project specific' factors:

Project size; physical location; cumulative impacts; community make-up and attitudes; developer behaviour.

Community Attitudes

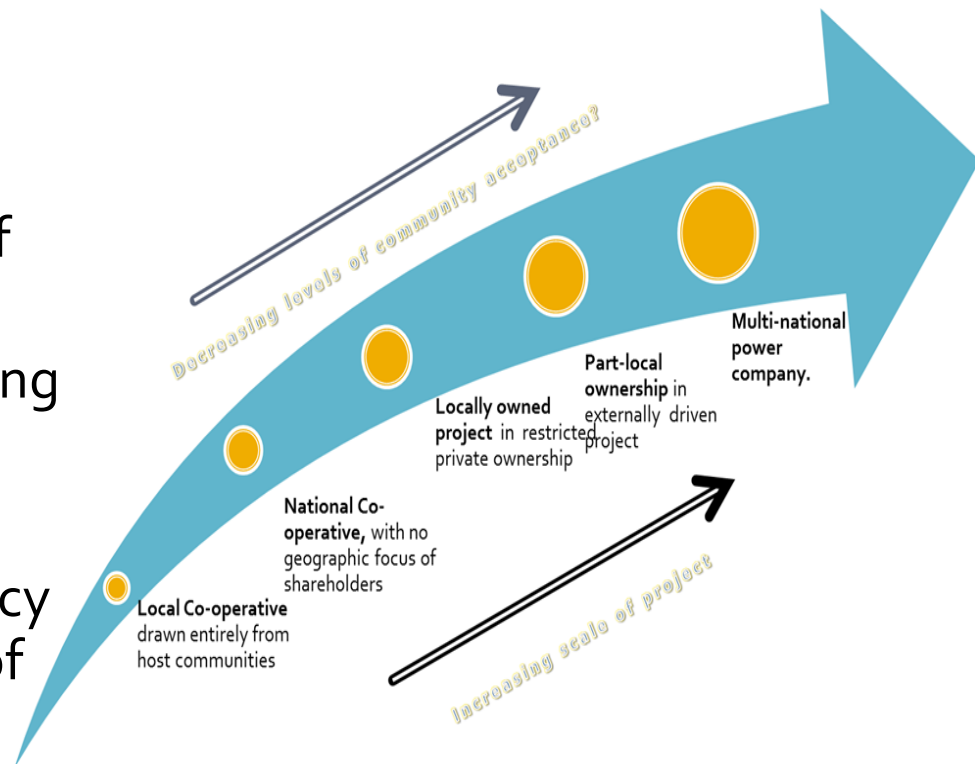
- Large body of research that has examined the attitudes of host communities, mostly based on individual & isolated case studies;
- Perspectives from range of disciplines;
- Body of evidence that indicates the influence of:
 - Individual attributes (demography etc);
 - Relationships (with developers etc);
 - Context (landscape, actors etc);
 - Perceptions of process;
 - Perceived impacts.
- However, methods have constrained understanding of the complexity and dynamic nature of individual disputes, link between action and attitude and wider structural elements of the energy system.



From Wolsink 2007

Governance of wind energy projects

- The way in which projects are regulated shape levels of social acceptance.
- Governance factors also influence:
 - Perceived costs and benefits of projects.
 - Opportunities for benefit sharing
 - Procedural justice and participation
 - Effectiveness of the broad policy environment to take account of community concerns



Summary of influences on social acceptance

<i>Issue</i>	<i>Key influences</i>	
Individual attitudes	<ul style="list-style-type: none"> • Age, gender etc • Strength of place attachment • Political beliefs and voting preferences • Emotional response • Prior experience of wind turbines 	<ul style="list-style-type: none"> • Attitudes to environmental issues • Psychological factors including perception of social norms • Individual roles (consumer, landowner etc) • Familiarity with wind energy
Relationships	<ul style="list-style-type: none"> • Type and level of social capital • Trust in government other public agencies and developers • Proximity to, and visibility of, turbines • Technology-society relationships 	<ul style="list-style-type: none"> • Time, reflecting the dynamic nature of social acceptance • National-local policy • Regulator-Developer links • Discourses within and between communities
Contextual issues	<ul style="list-style-type: none"> • Policy regimes • Project design – turbine height, colour number and massing • Place attachment 	<ul style="list-style-type: none"> • Range and mix of actors • Ownership of proposed project • Specific siting issues • Cumulative impacts
Perceived impacts	<ul style="list-style-type: none"> • Noise • Landscape • Shadow flicker • Property values • Level of economic benefit • Bio-diversity: bats, birds • Infrasound 	<ul style="list-style-type: none"> • Navigation lights • Health concerns • Levels of economic benefits • Disruption of 'place' • Efficiency of turbines and wind energy • Distributive justice
Process-related issues	<ul style="list-style-type: none"> • Trust in institutions involved • Transparency and openness • Procedural justice • Expectations and aspirations of public participation • Availability and quality of information 	<ul style="list-style-type: none"> • Power in the participation process • Value places on lay and expert knowledge • Timing • Discourses of community, developer, regulatory bodies • Fait accompli

Wider reflections

Effective insights on why projects face opposition but how to effectively address this remains a major challenge;

Concepts

- Is social acceptance the best conceptual frame?
- Alternative concepts are there?
- A better understanding of context, not just objectors;
- The potential of a complex socio-ecological model of acceptance;
- Must better link to system characteristics and the process of transition

Research direction and coherence

- Developing a more coherent and diverse community of researchers
- New research questions: e.g.
 - ownership of wind as an asset;
 - dynamics of acceptance;
 - research on effect of developer and regulator activity
 - Role of the State

Wider reflections

Methods

- The dominance of discrete case studies and poor comparability;
- Common research protocols;
- More methodological innovation and ambition

Knowledge exchange

- New ways of securing co-production of evidence and innovation;
- Emphasis on complexity and no quick fixes.

Thank you

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